STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

401 CHURCH STREET
L & C ANNEX 6TH FLOOR
NASHVILLE TN 37243

Honorable George Gantte
Mayor
131 E. Main St.
P.O. Box 249
Dandridge, TN 37725

Subject: NPDES Permit No. TN0021245
Dandridge STP
Dandridge, Jefferson County, Tennessee

Dear Mayor Gantte:

In accordance with the provisions of the Tennessee Water Quality Control Act, Tennessee Code Annotated (T.C.A.), Sections 69-3-101 through 69-3-120, the Division of Water Pollution Control hereby issues the enclosed NPDES Permit. The continuance and/or reissuance of this NPDES Permit is contingent upon your meeting the conditions and requirements as stated therein.

Please be advised that a petition for permit appeal may be filed, pursuant to T.C.A. Section 69-3-105, subsection (i), by the permit applicant or by any aggrieved person who participated in the public comment period or gave testimony at a formal public hearing whose appeal is based upon any of the issues that were provided to the commissioner in writing during the public comment period or in testimony at a formal public hearing on the permit application. Additionally, for those permits for which the department gives public notice of a draft permit, any permit applicant or aggrieved person may base a permit appeal on any material change to conditions in the final permit from those in the draft, unless the material change has been subject to additional opportunity for public comment. Any petition for permit appeal under this subsection (i) shall be filed with the board within thirty (30) days after public notice of the commissioner's decision to issue or deny the permit.

If you have questions, please contact the Division of Water Pollution Control at your local Field Office at 1-888-891-TDEC; or, at this office, please contact Mr. Paul Higgins at (615) 532-1178 or by E-mail at *Paul.Higgins@tn.gov*.

Sincerely,

Vojin Janjić
Manager, Permit Section
Division of Water Pollution Control

Enclosure

cc/ec: DWPC, Permit Section & Knoxville Environmental Field Office
Mr. Mike Norton, Superintendent, Dandridge Wastewater Dept., mndwd@yahoo.com
Ms. Dana L. Wright, Director of Policy and Legislative Affairs, dana@tcwn.org

STATE OF TENNESSEE

NPDES PERMIT

No. TN0021245

Authorization to discharge under the
National Pollutant Discharge Elimination System (NPDES)

Issued By

Tennessee Department of Environment and Conservation
Division of Water Pollution Control
401 Church Street
6th Floor, L & C Annex
Nashville, Tennessee 37243-1534

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.)

Discharger:	**Dandridge STP**
is authorized to discharge:	**treated municipal wastewater from Outfall 001**
from a facility located:	**in Dandridge, Jefferson County, Tennessee**
to receiving waters named:	**Douglas Lake at French Broad River mile 45.5**

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on:	**January 1, 2011**
This permit shall expire on:	**December 1, 2015**
Issuance date:	**November 30, 2010**

FOR
Paul E. Davis, Director
Division of Water Pollution Control

TABLE OF CONTENTS

1.0. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1.1. NUMERIC AND NARRATIVE EFFLUENT LIMITATIONS – EXISTING SYSTEM

The Town of Dandridge is authorized to discharge treated municipal wastewater from Outfall 001 to Douglas Lake at French Broad River mile 45.5. Discharge 001 consists of municipal wastewater from a treatment facility with a design capacity of 0.4 MGD. Discharge 001 shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Effluent Limitations						Monitoring Requirements		
	Monthly Average Conc. (mg/l)	Monthly Average Amount (lb/day)	Weekly Average Conc. (mg/l)	Weekly Average Amount (lb/day)	Daily Maximum Conc. (mg/l)	Daily Minimum Percent Removal	Measurement Frequency	Sample Type	Sampling Point
BOD_5	30	100	40	133	45	40	3/week	composite	effluent
	Report	—	—	—	Report	—	3/week	composite	influent
Suspended Solids	30	100	40	133	45	40	3/week	composite	effluent
	Report	—	—	—	Report	—	3/week	composite	influent
Total Nitrogen *	—	—	—	—	Rpt (qtr avg)	Rpt (qtr avg load, lb/D)	1/ quarter	composite	influent
	—	—	—	—	Rpt (qtr avg)	Rpt (qtr avg load, lb/D)	1/ quarter	composite	effluent
Total Phosphorus *	—	—	—	—	Rpt (qtr avg)	Rpt (qtr avg load, lb/D)	1/ quarter	composite	influent
	—	—	—	—	Rpt (qtr avg)	Rpt (qtr avg load, lb/D)	1/ quarter	composite	effluent
Sanitary Sewer Overflows, Total Occurrences	Report						continuous	visual	NA
Dry Weather Overflows, Total Occurrences	Report						continuous	visual	NA
Bypass of Treatment, Total Occurrences	Report						continuous	visual	NA

Note: The permittee shall achieve 85% removal of BOD_5 and TSS on a monthly average basis. The permittee shall report all instances of overflow and/or bypasses. See Part 2.3.3.a for the definition of overflow and Part 1.5.5.1 for reporting requirements.

Note: See Part 1.2.3 for test procedures.

* Quarterly results are to be reported as typical averages (sum of results divided by the number of samples within the reporting period; average concentration with average flow for the reporting period).

Effluent Characteristics	Effluent Limitations			Monitoring Requirements		
	Monthly Average	Daily Minimum	Daily Maximum	Measurement Frequency	Sample Type	Sampling Point
E. coli	126/100 ml (see the following paragraphs)	—	487/100 ml	3/week	grab	effluent
Chlorine residual (Total)	—	—	2.0 mg/l instantaneous	5/week	grab	effluent
Settleable solids	—	—	1.0 ml/l	5/week	grab	effluent
Dissolved oxygen	—	1.0 mg/l instantaneous	—	5/week	grab	effluent
pH (Standard Units)	—	6.0	9.0	5/week	grab	effluent
Flow (MGD)	Report	—	Report	7/week	continuous	influent
	Report	—	Report	7/week	continuous	effluent

Note: See Part 1.2.3 for test procedures.

Total residual chlorine (TRC) monitoring shall be applicable when chlorine, bromine, or any other oxidants are added. The acceptable methods for analysis of TRC are any methods specified in Title 40 CFR, Part 136 as amended. The method detection level (MDL) for TRC shall not exceed 0.05 mg/l unless the permittee demonstrates that its MDL is higher. The permittee shall retain the documentation that justifies the higher MDL and have it available for review upon request. In cases where the permit limit is less that the MDL, the reporting of TRC at less than the MDL shall be interpreted to constitute compliance with the permit.

1.2. NUMERIC AND NARRATIVE EFFLUENT LIMITATIONS – UPGRADED SYSTEM

The Town of Dandridge is authorized to discharge treated municipal wastewater from Outfall 001 to Douglas Lake at French Broad River mile 45.5. Discharge 001 consists of municipal wastewater from a treatment facility with a design capacity of 0.9 MGD. Discharge 001 shall be limited and monitored by the permittee as specified below:

Effluent Characteristics	Effluent Limitations						Monitoring Requirements		
	Monthly Average Conc. (mg/l)	Monthly Average Amount (lb/day)	Weekly Average Conc. (mg/l)	Weekly Average Amount (lb/day)	Daily Maximum Conc. (mg/l)	Daily Minimum Percent Removal	Measurement Frequency	Sample Type	Sampling Point
BOD_5	30	225	40	300	45	40	3/week	composite	effluent
	Report	—	—	—	Report	—	3/week	composite	influent
Suspended Solids	30	225	40	300	45	40	3/week	composite	effluent
	Report	—	—	—	Report	—	3/week	composite	influent
Total Nitrogen *	—	—	—	—	Rpt (qtr avg)	Rpt (qtr avg load, lb/D)	1/ quarter	composite	influent
	—	—	—	—	Rpt (qtr avg)	Rpt (qtr avg load, lb/D)	1/ quarter	composite	effluent
Total Phosphorus *	—	—	—	—	Rpt (qtr avg)	Rpt (qtr avg load, lb/D)	1/ quarter	composite	influent
	—	—	—	—	Rpt (qtr avg)	Rpt (qtr avg load, lb/D)	1/ quarter	composite	effluent
Sanitary Sewer Overflows, Total Occurrences	Report						continuous	visual	NA
Dry Weather Overflows, Total Occurrences	Report						continuous	visual	NA
Bypass of Treatment, Total Occurrences	Report						continuous	visual	NA

Note: The permittee shall achieve 85% removal of BOD_5 and TSS on a monthly average basis. The permittee shall report all instances of overflow and/or bypasses. See Part 2.3.3.a for the definition of overflow and Part 1.5.5.1 for reporting requirements.

Note: See Part 1.2.3 for test procedures.

* Quarterly results are to be reported as typical averages (sum of results divided by the number of samples within the reporting period; average concentration with average flow for the reporting period).

Notification Requirement (Reference Part 2.2.1.(c)) - The division must be notified within 30 days of the date when the upgraded system (0.9 MGD) becomes functional.

Effluent Characteristics	Effluent Limitations			Monitoring Requirements		
	Monthly Average	Daily Minimum	Daily Maximum	Measurement Frequency	Sample Type	Sampling Point
E. coli	126/100 ml (see the following paragraphs)	—	487/100 ml	3/week	grab	effluent
Chlorine residual (Total)	—	—	2.0 mg/l instantaneous	5/week	grab	effluent
Settleable solids	—	—	1.0 ml/l	5/week	grab	effluent
Dissolved oxygen	—	1.0 mg/l instantaneous	—	5/week	grab	effluent
pH (Standard Units)	—	6.0	9.0	5/week	grab	effluent
Flow (MGD)	Report	—	Report	7/week	continuous	influent
	Report	—	Report	7/week	continuous	effluent

Note: See Part 1.2.3 for test procedures.

Total residual chlorine (TRC) monitoring shall be applicable when chlorine, bromine, or any other oxidants are added. The acceptable methods for analysis of TRC are any methods specified in Title 40 CFR, Part 136 as amended. The method detection level (MDL) for TRC shall not exceed 0.05 mg/l unless the permittee demonstrates that its MDL is higher. The permittee shall retain the documentation that justifies the higher MDL and have it available for review upon request. In cases where the permit limit is less that the MDL, the reporting of TRC at less than the MDL shall be interpreted to constitute compliance with the permit.

1.3. LIMITATIONS APPLICABABLE TO BOTH SYSTEMS

The wastewater discharge must be disinfected to the extent that viable coliform organisms are effectively eliminated. The concentration of the E. *coli* group after disinfection shall not exceed 126 cfu per 100 ml as the geometric mean calculated on the actual number of samples collected and tested for E. *coli* within the required reporting period. The permittee may collect more samples than specified as the monitoring frequency. Samples may not be collected at intervals of less than 12 hours. For the purpose of determining the geometric mean, individual samples having an *E. coli* group concentration of less than one (1) per 100 ml shall be considered as having a concentration of one (1) per 100 ml. In addition, the concentration of the *E. coli* group in any individual sample shall not exceed a specified maximum amount. A maximum daily limit of 487 colonies per 100 ml applies to lakes and Exceptional Tennessee Waters.

There shall be no distinctly visible floating scum, oil or other matter contained in the wastewater discharge. The wastewater discharge must not cause an objectionable color contrast in the receiving stream.

The wastewater discharge shall not contain pollutants in quantities that will be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.

Sludge or any other material removed by any treatment works must be disposed of in a manner that prevents its entrance into or pollution of any surface or subsurface waters. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, TCA 68-31-101 et seq. and the Tennessee Hazardous Waste Management Act, TCA 68-46-101 et seq.

For the purpose of evaluating compliance with the permit limits established herein, where certain limits are below the State of Tennessee published required detection levels (RDLs) for any given effluent characteristics, the results of analyses below the RDL shall be reported as Below Detection Level (BDL), unless in specific cases other detection limits are demonstrated to be the best achievable because of the particular nature of the wastewater being analyzed.

For BOD_5 and TSS, the treatment facility shall demonstrate a minimum of 85% removal efficiency on a monthly average basis. This is calculated by determining an average of all daily influent concentrations and comparing this to an average of all daily effluent concentrations. The formula for this calculation is as follows:

$$\left[1 - \frac{\text{average of daily effluent concentration}}{\text{average of daily influent concentration}}\right] \times 100\% = \%\ \text{removal}$$

The treatment facility will also demonstrate 40% minimum removal of the BOD_5 and TSS based upon each daily composite sample. The formula for this calculation is as follows:

$$\left[1 - \frac{\text{daily effluent concentration}}{\text{daily influent concentration}}\right] \times 100\% = \%\ \text{removal}$$

1.4. MONITORING PROCEDURES

1.4.1. Representative Sampling

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than plus or minus 10% from the true discharge rates throughout the range of expected discharge volumes.

Samples and measurements taken in compliance with the monitoring requirements specified above shall be representative of the volume and nature of the monitored discharge, and shall be taken at the following location(s):

Influent samples must be collected prior to mixing with any other wastewater being returned to the head of the plant, such as sludge return. Those systems with more than one influent line must collect samples from each and proportion the results by the flow from each line.

Effluent samples must be representative of the wastewater being discharged and collected prior to mixing with any other discharge or the receiving stream. This can be a different point for different parameters, but must be after all treatment for that parameter or all expected change:

a. BOD_5 samples can be collected before disinfection to avoid having to seed the samples and dechlorinate if chlorine is used.

b. The chlorine residual must be measured after the chlorine contact chamber and any dechlorination. It may be to the advantage of the permittee to measure at the end of any long outfall lines.

c. Samples for *E. coli* can be collected at any point between disinfection and the actual discharge.

d. The dissolved oxygen can drop in the outfall line; therefore, D.O. measurements are required at the discharge end of outfall lines greater than one mile long. Systems with outfall lines less than one mile may measure dissolved oxygen as the wastewater leaves the treatment facility. For systems with dechlorination, dissolved oxygen must be measured after this step and as close to the end of the outfall line as possible.

e. Total suspended solids and settleable solids can be collected at any point after the final clarifier.

f. Biomonitoring tests (if required) shall be conducted on final effluent.

1.4.2. Sampling Frequency

Where the permit requires sampling and monitoring of a particular effluent characteristic(s) at a frequency of less than once per day or daily, the permittee is precluded from marking the "No Discharge" block on the Discharge Monitoring Report if there has been any discharge from that particular outfall during the period which coincides with the required monitoring frequency; i.e. if the required monitoring frequency is once per month or 1/month, the monitoring period is one month, and if the discharge occurs during only one day in that period then the permittee must sample on that day and report the results of analyses accordingly.

1.4.3. Test Procedures

a. Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304 (h) of the Clean Water Act (the "Act"), as amended, under which such procedures may be required.

b. Unless otherwise noted in the permit, all pollutant parameters shall be determined according to methods prescribed in Title 40, CFR, Part 136, as amended, promulgated pursuant to Section 304 (h) of the Act.

c. Composite samples must be proportioned by flow at time of sampling. Aliquots may be collected manually or automatically. The sample aliquots must be maintained at ≤ 6 degrees Celsius during the compositing period.

d. In instances where permit limits established through implementation of applicable water criteria are below analytical capabilities, compliance with those limits will be determined using the detection limits described in the TN Rules, Chapter 1200-4-3-.05(8).

1.4.4. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

a. The exact place, date and time of sampling;

b. The exact person(s) collecting samples;

c. The dates and times the analyses were performed;

d. The person(s) or laboratory who performed the analyses;

e. The analytical techniques or methods used, and;

f. The results of all required analyses.

1.4.5. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation shall be retained for a minimum of three (3) years, or longer, if requested by the Division of Water Pollution Control.

1.5. REPORTING

1.5.1. Monitoring Results

Monitoring results shall be recorded monthly and submitted monthly using Discharge Monitoring Report (DMR) forms supplied by the Division of Water Pollution Control. Submittals shall be postmarked no later than 15 days after the completion of the reporting period. A completed DMR with an original signature shall be submitted to the following address:

TENNESSEE DEPT. OF ENVIRONMENT & CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
ENFORCEMENT & COMPLIANCE SECTION
L & C ANNEX 6TH FLOOR
401 CHURCH STREET
NASHVILLE TN 37243

A copy of the completed and signed DMR shall be mailed to the Knoxville Environmental Field Office (EFO) at the following address:

TENNESSEE DEPT. OF ENVIRONMENT & CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
KNOXVILLE ENVIRONMENTAL FIELD OFFICE
3711 MIDDLEBROOK PIKE
KNOXVILLE TN 37921

A copy should be retained for the permittee's files. In addition, any communication regarding compliance with the conditions of this permit must be sent to the two offices listed above.

The first DMR is due on the 15th of the month following permit effectiveness.

DMRs and any other information or report must be signed and certified by a responsible corporate officer as defined in 40 CFR 122.22, a general partner or proprietor, or a principal municipal executive officer or ranking elected official, or his duly authorized representative. Such authorization must be submitted in writing and must explain the duties and responsibilities of the authorized representative.

The electronic submission of DMR data will be accepted only if formally approved beforehand by the division. For purposes of determining compliance with this permit, data approved by the division to be submitted electronically is legally equivalent to data submitted on signed and certified DMR forms.

1.5.2. Additional Monitoring by Permittee

If the permittee monitors any pollutant specifically limited by this permit more frequently than required at the location(s) designated, using approved analytical methods as specified herein, the results of such monitoring shall be included in the calculation and reporting of the values required in the DMR form. Such increased frequency shall also be indicated on the form.

1.5.3. Falsifying Results and/or Reports

Knowingly making any false statement on any report required by this permit or falsifying any result may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Water Pollution Control Act, as amended, and in Section 69-3-115 of the Tennessee Water Quality Control Act.

1.5.4. Monthly Report of Operation

Monthly operational reports shall be submitted on standard forms to the appropriate Division of Water Pollution Control Environmental Field Office in Jackson, Nashville, Chattanooga, Columbia, Cookeville, Memphis, Johnson City, or Knoxville. Reports shall be submitted by the 15th day of the month following data collection.

1.5.5. Bypass and Overflow Reporting

1.5.5.1. Report Requirements

A summary report of known or suspected instances of overflows in the collection system or bypass of wastewater treatment facilities shall accompany the Discharge Monitoring Report. The report must contain the date and duration of the instances of overflow and/or bypassing and the estimated quantity of wastewater released and/or bypassed.

The report must also detail activities undertaken during the reporting period to (1) determine if overflow is occurring in the collection system, (2) correct those known or suspected overflow points and (3) prevent future or possible overflows and any resulting bypassing at the treatment facility.

On the DMR, the permittee must report the number of sanitary sewer overflows, dry-weather overflows and in-plant bypasses separately. Three lines must be used on the DMR form, one for sanitary sewer overflows, one for dry-weather overflows and one for in-plant bypasses.

1.5.5.2. Anticipated Bypass Notification

If, because of unavoidable maintenance or construction, the permittee has need to create an in-plant bypass which would cause an effluent violation, the permittee must notify the division as soon as possible, but in any case, no later than 10 days prior to the date of the bypass.

1.5.6. Reporting Less Than Detection

A permit limit may be less than the accepted detection level. If the samples are below the detection level, then report "BDL" or "NODI =B" on the DMRs. The permittee must use the correct detection levels in all analytical testing required in the permit. The required detection levels are listed in the Rules of the Department of Environment and Conservation, Division of Water Pollution Control, Chapter 1200-4-3-.05(8).

For example, if the limit is 0.02 mg/l with a detection level of 0.05 mg/l and detection is shown; 0.05 mg/l must be reported. In contrast, if nothing is detected reporting "BDL" or "NODI =B" is acceptable.

1.6. COMPLIANCE WITH SECTION 208

The limits and conditions in this permit shall require compliance with an area-wide waste treatment plan (208 Water Quality Management Plan) where such approved plan is applicable.

1.7. REOPENER CLAUSE

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 307(a)(2) and 405(d)(2)(D) of the Clean Water Act, as amended, if the effluent standard, limitation or sludge disposal requirement so issued or approved:

a. Contains different conditions or is otherwise more stringent than any condition in the permit; or

b. Controls any pollutant or disposal method not addressed in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

2.0. GENERAL PERMIT REQUIREMENTS

2.1. GENERAL PROVISIONS

2.1.1. Duty to Reapply

Permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of Water Pollution Control (the "director") no later than 180 days prior to the expiration date. Such forms shall be properly signed and certified.

2.1.2. Right of Entry

The permittee shall allow the director, the Regional Administrator of the U.S. Environmental Protection Agency, or their authorized representatives, upon the presentation of credentials:

a. To enter upon the permittee's premises where an effluent source is located or where records are required to be kept under the terms and conditions of this permit, and at reasonable times to copy these records;

b. To inspect at reasonable times any monitoring equipment or method or any collection, treatment, pollution management, or discharge facilities required under this permit; and

c. To sample at reasonable times any discharge of pollutants.

2.1.3. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Water Pollution Control Act, as amended, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Water Pollution Control. As required by the Federal Act, effluent data shall not be considered confidential.

2.1.4. Proper Operation and Maintenance

a. The permittee shall at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems, which are installed by a permittee only when the operation is

necessary to achieve compliance with the conditions of the permit. Backup continuous pH and flow monitoring equipment are not required.

b. Dilution water shall not be added to comply with effluent requirements to achieve BCT, BPT, BAT and or other technology based effluent limitations such as those in State of Tennessee Rule 1200-4-5-.09.

2.1.5. Treatment Facility Failure (Industrial Sources)

The permittee, in order to maintain compliance with this permit, shall control production, all discharges, or both, upon reduction, loss, or failure of the treatment facility, until the facility is restored or an alternative method of treatment is provided. This requirement applies in such situations as the reduction, loss, or failure of the primary source of power.

2.1.6. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

2.1.7. Severability

The provisions of this permit are severable. If any provision of this permit due to any circumstance, is held invalid, then the application of such provision to other circumstances and to the remainder of this permit shall not be affected thereby.

2.1.8. Other Information

If the permittee becomes aware of failure to submit any relevant facts in a permit application, or of submission of incorrect information in a permit application or in any report to the director, then the permittee shall promptly submit such facts or information.

2.2. CHANGES AFFECTING THE PERMIT

2.2.1. Planned Changes

The permittee shall give notice to the director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants, which

are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

c. The division must be notified within 30 days of the date when the upgraded system (0.9 MGD) becomes functional.

2.2.2. Permit Modification, Revocation, or Termination

a. This permit may be modified, revoked and reissued, or terminated for cause as described in 40 CFR 122.62 and 122.64, Federal Register, Volume 49, No. 188 (Wednesday, September 26, 1984), as amended.

b. The permittee shall furnish to the director, within a reasonable time, any information which the director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the director, upon request, copies of records required to be kept by this permit.

c. If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established for any toxic pollutant under Section 307(a) of the Federal Water Pollution Control Act, as amended, the director shall modify or revoke and reissue the permit to conform to the prohibition or to the effluent standard, providing that the effluent standard is more stringent than the limitation in the permit on the toxic pollutant. The permittee shall comply with these effluent standards or prohibitions within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified or revoked and reissued to incorporate the requirement.

d. The filing of a request by the permittee for a modification, revocation, reissuance, termination, or notification of planned changes or anticipated noncompliance does not halt any permit condition.

2.2.3. Change of Ownership

This permit may be transferred to another party (provided there are neither modifications to the facility or its operations, nor any other changes which might affect the permit limits and conditions contained in the permit) by the permittee if:

a. The permittee notifies the director of the proposed transfer at least 30 days in advance of the proposed transfer date;

b. The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and

c. The director, within 30 days, does not notify the current permittee and the new permittee of his intent to modify, revoke or reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

Pursuant to the requirements of 40 CFR 122.61, concerning transfer of ownership, the permittee must provide the following information to the division in their formal notice of intent to transfer ownership: 1) the NPDES permit number of the subject permit; 2) the effective date of the proposed transfer; 3) the name and address of the transferor; 4) the name and address of the transferee; 5) the names of the responsible parties for both the transferor and transferee; 6) a statement that the transferee assumes responsibility for the subject NPDES permit; 7) a statement that the transferor relinquishes responsibility for the subject NPDES permit; 8) the signatures of the responsible parties for both the transferor and transferee pursuant to the requirements of 40 CFR 122.22(a), "Signatories to permit applications"; and, 9) a statement regarding any proposed modifications to the facility, its operations, or any other changes which might affect the permit limits and conditions contained in the permit.

2.2.4. Change of Mailing Address

The permittee shall promptly provide to the director written notice of any change of mailing address. In the absence of such notice the original address of the permittee will be assumed to be correct.

2.3. NONCOMPLIANCE

2.3.1. Effect of Noncompliance

All discharges shall be consistent with the terms and conditions of this permit. Any permit noncompliance constitutes a violation of applicable state and federal laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

2.3.2. Reporting of Noncompliance

a. 24-Hour Reporting

In the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the Division of Water Pollution Control in the appropriate Environmental Field Office within 24-hours from the time the permittee becomes aware of the circumstances. (The Environmental Field Office should be contacted for names and phone numbers of environmental response team).

A written submission must be provided within five days of the time the permittee becomes aware of the circumstances unless the director on a case-by-case basis waives this requirement. The permittee shall provide the director with the following information:

i. A description of the discharge and cause of noncompliance;

ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and

iii. The steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

b. Scheduled Reporting

For instances of noncompliance which are not reported under subparagraph 2.3.2.a above, the permittee shall report the noncompliance on the Discharge Monitoring Report. The report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

2.3.3. Overflow

a. "**Overflow**" means any release of sewage from any portion of the collection, transmission, or treatment system other than through permitted outfalls.

b. Overflows are prohibited.

c. The permittee shall operate the collection system so as to avoid overflows. No new or additional flows shall be added upstream of any point in the collection system, which experiences chronic overflows (greater than 5 events per year) or would otherwise overload any portion of the system.

d. Unless there is specific enforcement action to the contrary, the permittee is relieved of this requirement after: 1) an authorized representative of the Commissioner of the Department of Environment and Conservation has approved an engineering report and construction plans and specifications prepared in accordance with accepted engineering practices for correction of the problem; 2) the correction work is underway; and 3) the cumulative, peak-design, flows potentially added from new connections and line extensions upstream of any chronic overflow point are less than or proportional to the amount of inflow and infiltration removal documented upstream of that point. The inflow and infiltration reduction must be measured by the permittee using practices that are customary in the environmental engineering field and reported in an attachment to a Monthly Operating Report submitted to the local TDEC Environmental Field Office. The data measurement period shall be sufficient to account for seasonal rainfall patterns and seasonal groundwater table elevations.

e. In the event that more than 5 overflows have occurred from a single point in the collection system for reasons that may not warrant the self-imposed moratorium or completion of the actions identified in this paragraph, the permittee may request a meeting with the Division of Water Pollution Control EFO staff to petition for a waiver based on mitigating evidence.

2.3.4. Upset

a. "***Upset***" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

   i. An upset occurred and that the permittee can identify the cause(s) of the upset;

   ii. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;

   iii. The permittee submitted information required under "Reporting of Noncompliance" within 24-hours of becoming aware of the upset (if this information is provided orally, a written submission must be provided within five days); and

   iv. The permittee complied with any remedial measures required under "Adverse Impact."

2.3.5. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

2.3.6. Bypass

a. "***Bypass***" is the intentional diversion of waste streams from any portion of a treatment facility. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypasses are prohibited unless all of the following 3 conditions are met:

i. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;

ii. There are no feasible alternatives to bypass, such as the construction and use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass, which occurred during normal periods of equipment downtime or preventative maintenance;

iii. The permittee submits notice of an unanticipated bypass to the Division of Water Pollution Control in the appropriate Environmental Field Office within 24 hours of becoming aware of the bypass (if this information is provided orally, a written submission must be provided within five days). When the need for the bypass is foreseeable, prior notification shall be submitted to the director, if possible, at least 10 days before the date of the bypass.

c. Bypasses not exceeding permit limitations are allowed **only** if the bypass is necessary for essential maintenance to assure efficient operation. All other bypasses are prohibited. Allowable bypasses not exceeding limitations are not subject to the reporting requirements of 2.3.6.b.iii, above.

2.3.7. Washout

a. For domestic wastewater plants only, a "washout" shall be defined as loss of Mixed Liquor Suspended Solids (MLSS) of 30.00% or more. This refers to the MLSS in the aeration basin(s) only. This does not include MLSS decrease due to solids wasting to the sludge disposal system. A washout can be caused by improper operation or from peak flows due to infiltration and inflow.

b. A washout is prohibited. If a washout occurs the permittee must report the incident to the Division of Water Pollution Control in the appropriate Environmental Field Office within 24 hours by telephone. A written submission must be provided within five days. The washout must be noted on the discharge monitoring report. Each day of a washout is a separate violation.

2.4. LIABILITIES

2.4.1. Civil and Criminal Liability

Except as provided in permit conditions for "***Bypassing,***" "***Overflow,***" and "***Upset,***" nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the responsibility of the permittee to conduct

its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

2.4.2. Liability Under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or the Federal Water Pollution Control Act, as amended.

3.0. PERMIT SPECIFIC REQUIREMENTS

3.1. CERTIFIED OPERATOR

The waste treatment facilities shall be operated under the supervision of a certified wastewater treatment operator and the collection system shall be operated under the supervision of a certified collection system operator in accordance with the Water Environmental Health Act of 1984.

3.2. POTW PRETREATMENT PROGRAM GENERAL PROVISIONS

As an update of information previously submitted to the division, the permittee will undertake the following activity.

a. The current pretreatment program is in the inactive stage. The program will remain inactive as long as no significant industries discharge into the collection system. Should a significant industrial user request permission to discharge into the Dandridge system, then the City must request that the division reactivate the pretreatment program. This must be done prior to the industrial discharge taking place.

b. The permittee shall enforce 40 CFR 403.5, "prohibited discharges". These general prohibitions and the specific prohibitions in this section apply to all non-domestic sources introducing pollutants into the POTW whether the source is subject to other National Pretreatment Standards or any state or local pretreatment requirements.

   Specific prohibitions. Under no circumstances shall the permittee allow introduction of the following wastes in the waste treatment system:

   i. Pollutants which create a fire or explosion hazard in the POTW;

   ii. Pollutants which will cause corrosive structural damage to the treatment works, but in no case discharges with pH less than 5.0 unless the system is specifically designed to accept such discharges.

   iii. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the treatment system resulting in interference.

   iv. Any pollutant, including oxygen-demanding pollutants (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the treatment works.

   v. Heat in amounts which will inhibit biological activity in the treatment works resulting in interference, but in no case heat in such quantities that the

temperature at the treatment works exceeds 40°C (104°F) unless the works are designed to accommodate such heat.

vi. Any priority pollutant in amounts that will contaminate the treatment works sludge.

vii. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

viii. Pollutants which result in the presence of toxic gases, vapors or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

ix. Any trucked or hauled pollutants except at discharge points designated by the POTW.

c. The permittee shall notify the Tennessee Division of Water Pollution Control of any of the following changes in user discharge to the system no later than 30 days prior to change of discharge:

i. New introductions into such works of pollutants from any source which would be a new source as defined in Section 306 of the Act if such source were discharging pollutants.

ii. New introductions of pollutants into such works from a source which would be subject to Section 301 of the "Federal Water Quality Act as Amended" if it were discharging such pollutants.

iii. A substantial change in volume or character of pollutants being introduced into such works by a source already discharging pollutants into such works at the time the permit is issued.

This notice will include information on the quantity and quality of the wastewater introduced by the new source into the publicly owned treatment works, and on any anticipated impact on the effluent discharged from such works. If this discharge necessitates a revision of the current NPDES permit or pass-through guidelines, discharge by this source is prohibited until the Tennessee Division of Water Pollution Control gives final authorization.

3.3. SLUDGE MANAGEMENT PRACTICES

a. The permittee must comply with 40 CFR 503 et seq. Sludge shall be sampled and analyzed at a frequency dependant both on the amount of sludge generated annually and on the disposal practice utilized. Whenever sampling and analysis are required by 40 CFR 503, the permittee shall report to the division the quantitative data for the following parameters:

1)	Arsenic	7)	Nickel
2)	Cadmium	8)	Selenium
3)	Copper	9)	Zinc
4)	Lead	10)	Nitrite plus Nitrate, NO_2, + NO_3 as N
5)	Mercury	11)	Total Kjeldahl Nitrogen, as N
6)	Molybdenum	12)	Ammonia, NH_3, as N

This sludge analysis must be submitted by February 19th of each calendar year. This information shall be submitted to the Division of Water Pollution Control, Central Office, 401 Church Street, 6th Floor Annex, Nashville TN 37243-1534, Attention: Sludge Coordinator, Municipal Facilities Section.

b. Land application of sludge shall halt immediately if any of the following concentrations are exceeded:

POLLUTANT	CONCENTRATION (mg/kg[1])
Arsenic	75
Cadmium	85
Zinc	7500
Copper	4300
Lead	840

POLLUTANT	CONCENTRATION (mg/kg[1])
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100

1 Dry Weight Basis

Monthly average pollutant concentrations shall not exceed Table 3 of 40 CFR §503.13. If they are exceeded cumulative pollutant loading rates are to be calculated and recorded and shall not exceed Table 2 of 40 CFR §503.13 for the life of the land application site.

c. If land application is the final disposition of the wasted sludge, the permittee shall provide pathogen reduction, sludge stabilization and comply with land and crop usage controls as listed in 40 CFR Part 503, as authorized by the Clean Water Act. Records must be maintained by the permittee that indicate compliance or non-compliance with this rule. If the permittee is required to report to EPA, copies of all reports should be sent to the division, at the address listed in paragraph 1 of this section.

d. Before land applying municipal sludge the permittee must obtain approvals for each site(s) in writing from the division using the latest revision of Guidelines for Land Application or Surface Disposal of Biosolids, unless the sludge being land applied meets the pollutant concentrations of 40 CFR 503.13(b)(3), the Class A pathogen requirements in 40 CFR 503.32(a), and one of the vector attraction reduction requirements in 40 CFR 503.33 (b)(1) through (b)(8).

e. Reopener: If an applicable "acceptable management practice" or numerical limitation for pollutants in sewage sludge promulgated under Section 405(d)(2) of the Clean Water Act, as amended by the Water Quality Act of 1987, is more stringent than the sludge pollutant limit or acceptable management practice in this permit, or controls a pollutant not limited in this permit, this permit shall be promptly modified or revoked and reissued to conform to the requirements promulgated under Section 405(d)(2). The permittee shall comply with the limitations by no later than the compliance deadline specified in the applicable regulations as required by Section 405(d)(2) of the Clean Water Act.

f. Notice of change in sludge disposal practice: The permittee shall give prior notice to the director of any change planned in the permittee's sludge disposal practice. If land application activities are suspended permanently and sludge disposal moves to a municipal solid waste landfill, the permittee shall contact the local Division of Solid Waste Management office address for other permitting and approvals (see table below):

Division of Solid Waste Management			
Office	**Location**	**Zip Code**	**Phone No.**
Chattanooga	540 McCallie Avenue, Suite 550	37402-2013	(423) 634-5745
Jackson	1625 Hollywood Drive	38305	(731) 512-1300
Cookeville	1221 South Willow Avenue	38506	(931) 432-4015
Columbia	2484 Park Plus Drive	38401	(931) 380-3371
Johnson City	2305 Silverdale Road	37601	(423) 854-5400
Knoxville	3711 Middlebrook Pike	37921	(865) 594-6035
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	(901) 371-3000
Nashville	711 R.S. Gass Boulevard	37243-1550	(615) 687-7000

3.4. PLACEMENT OF SIGNS

Within sixty (60) days of the effective date of this permit, the permittee shall place and maintain a sign(s) at each outfall and any bypass/overflow point in the collection system. For the purposes of this requirement, any bypass/overflow point that has discharged five (5) or more times in the last year must be so posted. The sign(s) should be clearly visible to the public from the bank and the receiving stream. The minimum sign size should be two feet by two feet (2' x 2') with one-inch (1") letters. The sign should be made of durable material and have a white background with black letters.

The sign(s) are to provide notice to the public as to the nature of the discharge and, in the case of the permitted outfalls, that the discharge is regulated by the

Tennessee Department of Environment and Conservation, Division of Water Pollution Control. The following is given as an example of the minimal amount of information that must be included on the sign:

Permitted CSO or unpermitted bypass/overflow point:

UNTREATED WASTEWATER DISCHARGE POINT
Dandridge STP
(865) 397-2925
NPDES Permit NO. TN0021245
TENNESSEE DIVISION OF WATER POLLUTION CONTROL
1-888-891-8332 ENVIRONMENTAL FIELD OFFICE - Knoxville

NPDES Permitted Municipal/Sanitary Outfall:

TREATED MUNICIPAL/SANITARY WASTEWATER
Dandridge STP
(865) 397-2925
NPDES Permit NO. TN0021245
TENNESSEE DIVISION OF WATER POLLUTION CONTROL
1-888-891-8332 ENVIRONMENTAL FIELD OFFICE - Knoxville

No later than sixty (60) days from the effective date of this permit, the permittee shall have the above sign(s) on display in the location specified.

3.5. ANTIDEGRADATION

Pursuant to the Rules of the Tennessee Department of Environment and Conservation, Chapter 1200-4-3-.06, titled "Tennessee Antidegradation Statement," and in consideration of the department's directive in attaining the greatest degree of effluent reduction achievable in municipal, industrial, and other wastes, the permittee shall further be required, pursuant to the terms and conditions of this permit, to comply with the effluent limitations and schedules of compliance required to implement applicable water quality standards, to comply with a State Water Quality Plan or other state or federal laws or regulations, or where practicable, to comply with a standard permitting no discharge of pollutants.

4.0. DEFINITIONS AND ACRONYMS

4.1. DEFINITIONS

A "***bypass***" is defined as the intentional diversion of waste streams from any portion of a treatment facility.

A "***calendar day***" is defined as the 24-hour period from midnight to midnight or any other 24-hour period that reasonably approximates the midnight to midnight time period.

A "***composite sample***" is a combination of not less than 8 influent or effluent portions, of at least 100 ml, collected over a 24-hour period. Under certain circumstances a lesser time period may be allowed, but in no case, less than 8 hours.

The "***daily maximum concentration***" is a limitation on the average concentration in units of mass per volume (e.g. milligrams per liter), of the discharge during any calendar day. When a proportional-to-flow composite sampling device is used, the daily concentration is the concentration of that 24-hour composite; when other sampling means are used, the daily concentration is the arithmetic mean of the concentrations of equal volume samples collected during any calendar day or sampling period.

"***Degradation***" means the alteration of the properties of waters by the addition of pollutants or removal of habitat. Alterations not resulting in the condition of pollution that are of a temporary nature or those alterations having de minimus impact (not measurable or less than 5 percent loss of assimilative capacity) will not be considered degradation. Degradation will not be considered de minimus if a substantial loss (more than 50 percent) of assimilative capacity has already occurred.

"***Discharge***" or "discharge of a pollutant" refers to the addition of pollutants to waters from a source.

A "***dry weather overflow***" is a type of sanitary sewer overflow and is defined as one day or any portion of a day in which unpermitted discharge of wastewater from the collection or treatment system other than through the permitted outfall occurs and is not directly related to a rainfall event. Discharges from more than one point within a 24-hour period shall be counted as separate overflows.

An "***ecoregion***" is a relatively homogeneous area defined by similarity of climate, landform, soil, potential natural vegetation, hydrology, or other ecologically relevant variables.

The "***geometric mean***" of any set of values is the n^{th} root of the product of the individual values where "n" is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For the purposes of calculating the geometric mean, values of zero (0) shall be considered to be one (1).

A "***grab sample***" is a single influent or effluent sample collected at a particular time.

The "***instantaneous maximum concentration***" is a limitation on the concentration, in milligrams per liter, of any pollutant contained in the wastewater discharge determined from a grab sample taken from the discharge at any point in time.

The "***instantaneous minimum concentration***" is the minimum allowable concentration, in milligrams per liter, of a pollutant parameter contained in the wastewater discharge determined from a grab sample taken from the discharge at any point in time.

The "***monthly average amount***", shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.

The "***monthly average concentration***", other than for *E. coli* bacteria, is the arithmetic mean of all the composite or grab samples collected in a one-calendar month period.

A "***one week period***" (or "***calendar-week***") is defined as the period from Sunday through Saturday. For reporting purposes, a calendar week that contains a change of month shall be considered part of the latter month.

"***Pollutant***" means sewage, industrial wastes, or other wastes.

A "***quarter***" is defined as any one of the following three-month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, and/or October 1 through December 31.

A "***rainfall event***" is defined as any occurrence of rain, preceded by 10 hours without precipitation that results in an accumulation of 0.01 inches or more. Instances of rainfall occurring within 10 hours of each other will be considered a single rainfall event.

A "***rationale***" (or "fact sheet") is a document that is prepared when drafting an NPDES permit or permit action. It provides the technical, regulatory and administrative basis for an agency's permit decision.

A "***reference site***" means least impacted waters within an ecoregion that have been monitored to establish a baseline to which alterations of other waters can be compared.

A "***reference condition***" is a parameter-specific set of data from regional reference sites that establish the statistical range of values for that particular substance at least-impacted streams.

A "***sanitary sewer overflow (SSO)***" is defined as an unpermitted discharge of wastewater from the collection or treatment system other than through the permitted outfall.

"***Sewage***" means water-carried waste or discharges from human beings or animals, from residences, public or private buildings, or industrial establishments, or boats, together with such other wastes and ground, surface, storm, or other water as may be present.

"***Severe property damage***" when used to consider the allowance of a bypass or SSO means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass or SSO. Severe property damage does not mean economic loss caused by delays in production.

"***Sewerage system***" means the conduits, sewers, and all devices and appurtenances by means of which sewage and other waste is collected, pumped, treated, or disposed.

A "***subecoregion***" is a smaller, more homogenous area that has been delineated within an ecoregion.

"***Upset***" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

The term, "***washout***" is applicable to activated sludge plants and is defined as loss of mixed liquor suspended solids (MLSS) of 30.00% or more from the aeration basin(s).

"***Waters***" means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion thereof except those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters.

The "***weekly average amount***", shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar week when the measurements were made.

The "***weekly average concentration***", is the arithmetic mean of all the composite samples collected in a one-week period. The permittee must report the highest weekly average in the one-month period.

4.2. ACRONYMNS AND ABBREVIATIONS

1Q10 – 1-day minimum, 10-year recurrence interval

30Q5 – 30-day minimum, 5-year recurrence interval

7Q10 – 7-day minimum, 10-year recurrence interval

BAT – best available technology economically achievable

BCT – best conventional pollutant control technology

BDL – below detection level

BOD_5 – five day biochemical oxygen demand

BPT – best practicable control technology currently available

$CBOD_5$ – five day carbonaceous biochemical oxygen demand

CEI – compliance evaluation inspection

CFR – code of federal regulations

CFS – cubic feet per second

CFU – colony forming units

CIU – categorical industrial user

CSO – combined sewer overflow

DMR – discharge monitoring report

D.O. – dissolved oxygen

E. coli – *Escherichia coli*

EFO – environmental field office

LB(lb) - pound

IC_{25} – inhibition concentration causing 25% reduction in survival, reproduction and growth of the test organisms

IU – industrial user

IWS – industrial waste survey

LC_{50} – acute test causing 50% lethality

MDL – method detection level

MGD – million gallons per day

MG/L(mg/l) – milligrams per liter

ML – minimum level of quantification

ml – milliliter

MLSS – mixed liquor suspended solids

MOR – monthly operating report

NODI – no discharge

NOEC – no observed effect concentration

NPDES – national pollutant discharge elimination system

PL – permit limit

POTW – publicly owned treatment works

RDL – required detection limit

SAR – semi-annual [pretreatment program] report

SIU – significant industrial user

SSO – sanitary sewer overflow

STP – sewage treatment plant

TCA – Tennessee code annotated

TDEC – Tennessee Department of Environment and Conservation

TIE/TRE – toxicity identification evaluation/toxicity reduction evaluation

TMDL – total maximum daily load

TRC – total residual chlorine

TSS – total suspended solids

WQBEL – water quality based effluent limit

RATIONALE

Dandridge STP
NPDES PERMIT No. TN0021245
DATE: 9/23/10
Permit Writer: Paul Higgins

1. FACILITY INFORMATION

Dandridge STP
Honorable George Gantte - Mayor
Dandridge, Jefferson County, Tennessee
(865) 397-2925
Treatment Plant Average Design Flow: 0.9 MGD
Percentage Industrial Flow: 0%
Treatment Description: Mechanical Fine Screen Headworks, Flow Equalization Basin, Dual-train Oxidation Ditch, Dual Final Clarifiers, Aerobic Digestion, Sodium Hypochlorite Disinfection System

2. RECEIVING STREAM INFORMATION

Douglas Lake at French Broad River mile 45.5
Watershed Group: French Broad-Lower
Hydrocode: 6010107
Low Flow = 378 MGD (CFS) 244 (MGD)
Low Flow Reference:
TVA Guaranteed Low Flow
Tennessee River and Reservoir System Operation
And Planning Review, December 1990 (Table 19-B)
Stream Assessment Information: Fully Supportive of Designated Uses
Stream Classification Categories:

Domestic Wtr Supply	Industrial	Fish & Aquatic	Recreation
X	X	X	X
Livestock Wtr & Wildlife	**Irrigation**	**Navigation**	
X	X		

3. CURRENT PERMIT STATUS

Permit Type:	**Municipal**
Classification:	**Minor**
Issuance Date:	**August 31, 2005**
Expiration Date:	**August 31, 2010**
Effective Date:	**October 1, 2005**

4. NEW PERMIT LIMITATIONS AND COMPLIANCE SCHEDULE SUMMARY

a. Historically, the Town of Dandridge has had difficulty meeting permit limitations for BOD_5, TSS, Settleable Solids, and *E. coli*. An Agreed Order (Case No. 07-068D) addressing these issues was finalized with Dandridge on April 15, 2008. In partial response to the order, the Town submitted an application for permit modification, complete with an Alternatives Analysis and supplemental information requested by the division, on May 8, 2008. A draft permit addressing the Town's proposed modifications was placed on Public Notice August 25, 2008. In response to the draft permit, the division received comments from the Tennessee Clean Water Network expressing concerns over the lack of numeric nutrient limits and over permit language addressing antidegradation issues in the permit. While clarification of the antidegradation language in the permit was being considered, the permit became back-logged and further action on the permit modification was not taken. As of August 31, 2010, the permit expired prompting this draft of a reissued permit, which addresses the same operational issues as the modification (and the order) and also addresses clarification of the antidegradation language and nutrient limits.

b. This permit addresses the permittee's proposed upgrade of the treatment facility, including an increase in design flow rate from 0.4 to 0.9 MGD. Most of the changes to the permit are found in Parts 1.1 and 1.2, *NUMERIC AND NARRATIVE EFFLUENT LIMITATIONS*. Part 1.1 is applicable to the existing plant, before any capacity changes. Part 1.2 is applicable to the facility after the capacity increase is complete. Part 1.3 is more general and is applicable to the facility as a whole, independent of capacity. In Part 1.2 for the upgraded system, the reference to design capacity was changed and corresponding changes were made to the monthly and weekly average load limits for BOD_5 and Total Suspended Solids. These changes are discussed in Sections 6.1 and 7. Additionally, quarterly influent and effluent monitoring and reporting requirements for total nitrogen and phosphorus have been added for both the existing and the upgraded plants in support of EPA's joint State/Federal Mississippi River/Gulf of Mexico Watershed Nutrient Task Force (see Section 6.2 below). The remaining parameters from the last permit will remain in effect.

c. It is possible that the proposed facility upgrade project will be completed during the term of this permit. In this event, the permittee must notify the department, in writing, that the new system is operational. After the department has been notified, the monthly and weekly average load limits for BOD_5 and Total Suspended Solids will go into effect and will be changed on the pre-printed DMR forms.

d. Compliance Schedule Summary

Description of Report to be Submitted	Reference Section in Permit
Monthly Discharge Monitoring Reports	1.5.1
Monthly Operational Reports	1.5.4
Monthly Bypass and Overflow Summary Report	1.5.5.1
Sludge analysis must be submitted by February 19th of each calendar year	3.3.a

e. For comparison, this rationale contains a table depicting the previous permit limits and effluent monitoring requirements in Appendix 1.

5. PREVIOUS PERMIT DISCHARGE MONITORING REPORT REVIEW

A review of the DMR summary from January 2007 - August 2010 reveals that the City of Dandridge has exceeded permit limits for most permit parameters repeatedly. The only permit parameter which remains in control is pH.

A complete discharge monitoring report summary is presented in Appendix 2.

6. PROPOSED EFFLUENT LIMITS & RATIONALE – UPGRADED SYSTEM

PARAMETERS	MONTHLY AVERAGE CONCENTRATION (MG/L)	MONTHLY AVERAGE AMOUNT (LB/DAY)	WEEKLY AVERAGE CONCENTRATION (MG/L)	WEEKLY AVERAGE AMOUNT (LB/DAY)	DAILY MAXIMUM CONCENTRATION (MG/L)	DAILY MINIMUM PERCENT REMOVAL	RATIONALE
BOD_5	30	225	40	300	45	40	T.C.A. 1200-4-5-.09
Total Suspended Solids	30	225	40	300	45	40	T.C.A. 1200-4-5-.09
Dissolved Oxygen (mg/l)	1.0 (daily minimum) instantaneous	—	—	—	—	—	D.O. protection, Refer to 6.1 below
Total Chlorine Residual (mg/l)	—	—	—	—	2.0 (daily maximum)	—	Refer to 6.3 below
Total Nitrogen (applicable to current and upgraded systems)	—	—	—	—	Report (qtr avg)	Report (qtr avg load, lb/D)	Refer to 6.2 below
Total Phosphorus (applicable to current and upgraded systems)	—	—	—	—	Report (qtr avg)	Report (qtr avg load, lb/D)	Refer to 6.2 below
E. coli (colonies/100ml)	126/100 ml	—	—	—	487/100	—	T.C.A. 1200-4-3-.03, Refer to 6.4 below
Settleable Solids (ml/l)		—	—	—	1.0 (daily maximum)	—	T.C.A. 1200-4-5-.09
pH (standard units)	—	—	—	—	6.0 – 9.0	—	T.C.A. 1200-4-3-.03
Flow (MGD):							
Influent	Report	—	—	—	Report	—	Used to quantify pollutant load
Effluent	Report	—	—	—	Report	—	Used to quantify pollutant load
Sanitary Sewer Overflows, Total Occurrences			Report				Refer to 6.5 below
Dry Weather Overflows, Total Occurrences			Report				Refer to 6.5 below
Bypass of Treatment, Total Occurrences			Report				Refer to 6.5 below

Reference Part 1.2

6.1. BOD_5, TSS, % REMOVAL REQUIREMENTS, AND DISSOLVED OXYGEN

Biochemical oxygen demand, or BOD, is a measure of the oxygen used when biological processes break down organic pollutants in wastewater. The amount of oxygen used is more specifically referred to as the five-day biochemical oxygen demand, or BOD_5. This parameter is used in the wastewater industry to measure both the strength of wastewater and the performance of wastewater treatment processes. Limits on the oxygen demand remaining in the treated wastewater is often necessary to prevent pollutants in the wastewater from driving oxygen in the receiving stream down below the levels necessary to support fish and aquatic life.

For this facility the BOD_5 and TSS limits of 30 mg/l (Monthly Average), 40 mg/l (Weekly Average), and 45 mg/l (Daily Maximum) are technology-based effluent limits for conventional secondary treatment plants (1200-4-5-.09). The dissolved oxygen effluent limitation of 1.0 mg/l is a practical limit achievable by the facility rather than a water-quality based limit necessary to protect fish and aquatic life.

The treatment facility is required to remove 85% of BOD_5, and TSS that enter the facility on a monthly basis. This is part of the minimum requirement for all municipal treatment facilities contained in Code of Federal Regulations 40 Part 133.102. The reasons stated by the U.S.E.P.A. for these requirements are to achieve these two basic objectives:

(1) To encourage municipalities to correct excessive inflow and infiltration (I/I) problems in their sanitary sewer systems, and
(2) To help prevent intentional dilution of the influent wastewater as a means of meeting permit limits.

6.2. TOTAL NITROGEN AND TOTAL PHOSPHORUS LIMITATIONS

Quarterly monitoring for Total Nitrogen and Total Phosphorus is imposed in support of the joint State/Federal Mississippi River/Gulf of Mexico Watershed Nutrient Task Force, Action Plan for Reducing, Mitigating, and Controlling Hypoxia in the Northern Gulf of Mexico. Monitoring results from major municipal and industrial facilities discharging within the Mississippi River Basin will help assess current point source loadings to the Gulf and enable the task force to track changes in loadings across the basin over time. EPA believes that Section 308(a) of the Clean Water Act provides broad authority to require nutrient monitoring, even where there is no reasonable potential for a particular facility to cause or contribute to excursions of criteria within the immediate receiving waterbody. Additionally, influent monitoring of the same parameters and frequency may be imposed by the state for use in evaluating ability of existing technologies to remove nutrients. Quarterly results are to be reported as typical averages (sum of results divided by the number of samples within the reporting period; average concentration with average flow for the reporting period).

Numeric limits for nutrients have been considered for this and similar permits. The division has published guidance for assessing when additional controls are needed for nutrients in Tennessee waters entitled, *Development of Regionally Based Interpretations of Tennessee's Narrative Based Nutrient Criterion*. However, development of numeric limits based on this translator are not justified based on the interpretive guidance itself.

The Executive summary of the *Development of Regionally Based Interpretations of Tennessee's Narrative Based Nutrient Criterion* states: "Subecoregional nutrient criteria should only apply to streams wholly contained (80 percent or greater) within the subecoregion. The criteria should not apply to lakes or wetlands." The *Development of Regionally Based Interpretations of Tennessee's Narrative Based Nutrient Criterion* also explains that designated uses in lakes are competing. Nutrients support fishing uses but also promote interference with recreational uses (algae and some aquatic plants). Therefore a discharge of nutrients is not automatically "nutrient pollution."

The department has developed a written plan for development of nutrient criteria for lakes. This document can be accessed from the department's webpage at *http://www.state.tn.us/environment/wpc/publications/NutrientCriteriaWorkplanRev.pdf.*

6.3. CHLORINATION

The total residual chlorine limit of 2.0 mg/l is retained from the previous permit due to the anti-backsliding provision of 40 CFR 122.44(l) that requires a reissued permit to be as stringent as the previous permit.

6.4. *E. COLI* REQUIREMENTS

Disinfection of wastewater is required to protect the receiving stream from pathogenic microorganisms. Fecal coliform and *E. coli* are indicator organisms used as a measure of bacteriological health of a receiving stream and the effectiveness of disinfection.

As of September 30, 2004, the criterion for fecal coliform has been removed from the State's Water Quality Standards. Thus, the division imposes an *E. coli* limit on discharges of treated sewage for the protection of recreational use of the stream in lieu of the fecal coliform limit. The monthly average limit is 126 colonies per 100ml. The *E. coli* daily maximum limit of 487 colonies per 100 ml applies to lakes and exceptional Tennessee waters.

6.5. OVERFLOW AND BYPASS REPORTING

For the purposes of demonstrating proper operation of the collection, transmission, and treatment system, the permit defines overflow as any release of sewage other than through permitted outfalls. This definition includes, but is not necessarily limited to, sanitary sewer overflows and dry weather overflows as defined. For example, a collection system blockage or hydraulic overload that causes backup and release of sewage into a building during a wet weather event may not clearly fit either the definition of a sanitary sewer overflow or a dry weather overflow. Still, any unpermitted release potentially warrants permittee mitigation of human health and/or water quality impacts via direct or indirect contact and demonstrates a hydraulic problem in the system that warrants permittee consideration as part of proper operation and maintenance of the system.

However, for the more typical, unpermitted, releases into the environment, this permit intends interchangeable use of the terms, "overflow" and "sanitary sewer overflow" for compliance reporting purposes.

7. OTHER REQUIREMENTS AND CONDITIONS

7.1. GRADE 3 CERTIFIED WASTEWATER TREATMENT OPERATOR

The waste treatment facilities shall be operated under the supervision of a Grade 3 certified wastewater treatment operator in accordance with the Water Environmental Health Act of 1984.

7.2. GRADE 1 COLLECTION SYSTEM CERTIFIED OPERATOR

The collection system shall be operated under the supervision of a Grade 1 certified collection system operator in accordance with the Water Environmental Health Act of 1984.

7.3. PRETREATMENT PROGRAM

The current pretreatment program is in the inactive stage. The program will remain inactive as long as no significant industries discharge into the collection system. Should a significant industrial user request permission to discharge into the Dandridge system, then the City must request that the division reactivate the pretreatment program. This must be done prior to the industrial discharge taking place.

7.4. PERMIT TERM

This permit is being reissued for 5 years in order to coordinate its reissuance with other permits located within the French Broad-Lower Watershed.

8. ANTIDEGRADATION STATEMENT/WATER QUALITY STATUS

Tennessee's Antidegradation Statement is found in the *Rules of the Tennessee Department of Environment and Conservation, Rule 1200-4-3-.06*. This statement outlines the criteria for the following two types of high quality waters. Outstanding National Resource Waters (ONRWs) are designated by the Water Quality Control Board. Other high quality waters, as identified by the division, are referred to as Exceptional Tennessee Waters. Other surface waters not specifically identified and/or designated as high quality are referred to as Available Conditions or Unavailable Conditions Waters. Available Conditions Waters are those that have been assessed as exceeding all Water Quality Criteria for all of the streams designated uses. Unavailable Condition Waters have been assessed by the division as either not meeting water quality criteria or needing additional water-quality based controls to prevent excursion of criteria for some parameters pertinent to designated uses. Available and Unavailable Conditions waters are considered high quality waters for an individual designated use if it is fully supportive of that use, that is, if it exceeds all water quality criteria for the designated use.

The division has completed an evaluation of the receiving waters associated with the subject discharge and has found the receiving stream is neither ONRW nor Exceptional Water. Additionally, this water is fully supportive of its designated uses and meets the definition of "available conditions" and is, therefore, considered high quality for all designated uses.

According to Rule 1200-4-3-.06(3)(a), degradation of available conditions waters is not allowed without an evaluation of alternatives to degradation and consideration of the social and economic impact of all alternatives. In compliance with the state rule, the permittee submitted an alternatives analysis which included an economic and environmental analysis of 6 alternatives to the status quo, along with an evaluation of the population and growth areas of Dandridge along with projections of the sewer system usage and treatment capacity requirements over a 20 year project life. The alternatives included:

1. Repair/Expand Existing Plant
2. Consolidate with Jefferson City
3. Construct New Plant
4. Drip Irrigation
5. Spray Irrigation
6. Reuse

All six alternatives would address the permit limitation violations that have historically plagued the Dandridge WWTP. The population and growth analysis presented in the submittal was based on data from the Center for Business and Economic Research, University of Tennessee Knoxville, and indicated that the population of Dandridge is

projected to increase by 40.93% by the year 2025. Using these growth projections, the total STP average flow was projected to increase to nearly 0.9 MGD by the year 2025.

In the permit application Dandridge proposed the alternative of repairing and expanding the existing plant based on a significant savings in capital cost and 20 year present worth. The least costly alternative to expanding the existing facility would have a 40% higher capital cost and a 17% higher present worth. Because of the projected growth in the area, Dandridge used a capacity of 0.9 MGD as the basis for all the alternatives in the analysis. Even though the concentration limits in the proposed permit remain the same, the increase in capacity constitutes an increase in pollutant loading. In considering this case, the small increases in pollutant loadings (125 lbs/day) are relatively insignificant when compared to the total assimilative capacity of the French Broad River at Douglas Lake.

The department has maintained, and shall continue to assess, the water quality of the stream to assure that the water quality is adequate to protect the existing uses of the stream fully, and to assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

APPENDIX 1
PREVIOUS PERMIT LIMITS

City of Dandridge Effluent Limitations and Monitoring Requirements

Effluent Characteristics	Effluent Limitations								Monitoring Requirements		
	Monthly			Weekly		Daily			Measurement Frequency	Sample Type	Sample Point
	Average (mg/l)	Average (lb/day)	Removal (%)	Average (mg/l)	Average (lb/day)	Maximum (mg/l)	Minimum (mg/l)	Removal (%)			
BOD_5	30	100	85	40	133	45	--	40	3/week	composite	effluent
	Report					Report			3/week	composite	influent
Total Suspended Solids	30	100	85	40	133	45	--	40	3/week	composite	effluent
	Report					Report			3/week	composite	influent
E. coli, colonies/100 ml	126					487			3/week	grab	effluent
Total Chlorine Residual						2.0 instantaneous			5/week	grab	effluent
Settleable Solids (ml/l)						1.0			5/week	composite	effluent
Dissolved Oxygen							1.0 instantaneous		5/week	grab	effluent
pH (standard units)						9.0	6.0		5/week	grab	effluent
Flow (MGD)	Report Report					Report Report			7/week 7/week	continuous continuous	influent effluent
Sanitary Sewer Overflows, Total Occurrences	Report								continuous	visual	NA
Dry Weather Overflows, Total Occurrences	Report								continuous	visual	NA
Bypass of Treatment, Total Occurrences	Report								continuous	visual	NA

APPENDIX 2
Discharge Monitoring Report Summary

	BOD5			TSS			EFFLUENT FLOW	
Report Date	Monthly Avg mg/l	Daily Max mg/l	Monthly Removal Min %	Monthly Avg mg/l	Daily Max mg/l	Monthly Removal Min %	Monthly Avg MGD	Daily Max MGD
Limit	30	45	85	30	45	85		
1/31/2007	17	24	93	7	14	97	0.320	0.370
2/28/2007	21	30	94	12	36	95	0.318	0.510
3/31/2007	18	43	95	18	**98**	93	0.316	0.439
4/30/2007	25	40	92	21	32	92	0.327	0.410
5/31/2007	23	33	92	21	**108**	93	0.302	0.479
6/30/2007	16	35	94	12	**68**	96	0.311	0.417
7/31/2007	14	45	92	13	**91**	95	0.353	0.487
8/31/2007	12	21	94	5	11	93	0.337	0.432
9/30/2007	7	13	96	9	29	96	0.327	0.416
10/31/2007	11	21	95	4	8	99	0.325	0.599
11/30/2007	15	40	93	13	**88**	95	0.300	0.383
12/31/2007	26	41	91	**34**	**229**	87	0.308	0.371
1/31/2008	33	**70**	88	**63**	**227**	**78**	0.313	0.454
2/29/2008	27	**62**	90	26	**94**	90	0.320	0.577
3/31/2008	24	**67**	90	**36**	**227**	**84**	0.336	0.454
4/30/2008	23	**65**	91	19	**145**	93	0.317	0.428
5/31/2008	26	**60**	91	21	**76**	92	0.300	0.367
6/30/2008	25	30	91	23	**88**	92	0.290	0.401
7/31/2008	21	34	92	11	29	96	0.281	0.387
8/31/2008	18	35	92	16	**80**	94	0.288	0.396
9/30/2008	24	69	90	23	**148**	91	0.295	0.395
10/31/2008	18	25	92	5	11	98	0.277	0.383
11/30/2008	22	44	92	27	**61**	90	0.284	0.368
12/31/2008	**32**	**86**	**NR**	**41**	**235**	**NR**	0.306	0.484
1/31/2009	23	**84**	111	29	**148**	86	0.336	0.821
2/28/2009	**37**	**93**	**84**	**114**	**1180**	**61**	0.289	0.474
3/31/2009	24	**85**	93	19	41	92	0.315	0.398
4/30/2009	**62**	**353**	**NR**	**82**	**746**	**NR**	0.304	0.534
5/31/2009	**142**	**593**	**22**	**397**	**2966**	**-70**	0.316	0.520
6/30/2009	27	**65**	**NR**	34	**124**	**NR**	0.307	0.397
7/31/2009	21	**51**	92	14	27	93	0.314	0.446
8/31/2009	28	**70**	91	23	**67**	89	0.327	0.574
9/30/2009	**33**	**93**	89	28	**192**	88	0.318	0.775
10/31/2009	26	**93**	93	20	**68**	92	0.317	0.381
11/30/2009	25	**146**	91	**62**	**540**	**67**	0.339	0.801
12/31/2009	**41**	**86**	88	**104**	**837**	**59**	0.304	0.533
1/31/2010	25	**146**	**84**	**77**	**540**	**-84**	0.306	0.672
2/28/2010	**114**	**498**	**68**	**171**	**562**	**28**	0.294	0.448
3/31/2010	**34**	**82**	92	27	**154**	90	0.289	0.361
4/30/2010	**101**	**545**	**72**	**125**	**280**	**55**	0.307	0.359
5/31/2010	**41**	**109**	89	**105**	**505**	**63**	0.300	0.535
6/30/2010	**38**	**57**	88	**89**	**423**	**71**	0.265	0.355
7/31/2010	**86**	**193**	**76**	**204**	**670**	**38**	-2.744	0.310
8/31/2010	**64**	**182**	86	**85**	**410**	**72**	0.349	0.502

Report Date	pH Daily Min	pH Daily Max	DO Monthly Avg Min	TRC Monthly Avg Max	Settleable Solids Mo Avg Max	E coli Mo Avg Max	E coli Daily Max Max
Limits	6 SU	9 SU	1 mg/l	2 mg/l	1 ml/L	126 col/100 ml	487 col/100 ml
1/31/2007	7.0	7.5	6.3	1.9	0.4	NR	2
2/28/2007	7.0	7.5	6.4	2.0	0.0	14	400
3/31/2007	7.0	7.3	5.0	1.8	0.3	22	**1986**
4/30/2007	7.0	7.5	5.4	1.5	0.1	**147**	**1733**
5/31/2007	7.0	7.7	2.9	1.8	0.2	**165**	**2978**
6/30/2007	7.0	7.5	3.7	1.4	**85.0**	44	**1986**
7/31/2007	7.3	7.7	3.5	1.9	1.5	33	**2420**
8/31/2007	7.4	7.6	4.8	1.6	0.0	39	**579**
9/30/2007	7.4	7.7	6.0	1.8	0.2	16	122
10/31/2007	7.5	7.6	6.0	1.9	0.1	15	**2420**
11/30/2007	7.5	8.2	7.5	1.8	**3.0**	48	**2420**
12/31/2007	7.5	8.0	1.5	2.0	**30.0**	71	**2420**
1/31/2008	7.2	7.7	2.6	1.8	**90.0**	**448**	**2492**
2/29/2008	7.4	7.7	4.0	1.2	**7.0**	114	**1414**
3/31/2008	7.5	7.7	4.5	1.4	**1.5**	60	**1986**
4/30/2008	7.5	7.7	4.1	1.4	**100.0**	17	**2420**
5/31/2008	7.5	7.7	4.1	1.6	**3.0**	89	**649**
6/30/2008	7.5	7.7	3.2	2.0	**3.0**	**383**	**2420**
7/31/2008	7.5	7.7	3.0	1.7	**5.0**	76	**1011**
8/31/2008	7.4	7.9	4.0	1.2	**15.0**	97	**2420**
9/30/2008	7.4	8.1	4.3	1.0	**10.0**	**213**	**2420**
10/31/2008	7.4	7.9	3.4	1.7	0.3	107	**2420**
11/30/2008	7.4	8.0	5.0	**2.2**	**1.5**	35	121
12/31/2008	7.2	7.6	6.1	**2.2**	**150.0**	70	**980**
1/31/2009	7.2	7.5	2.4	1.6	**175.0**	35	**2420**
2/28/2009	7.2	7.5	6.0	**2.1**	**90.0**	26	435
3/31/2009	7.2	7.5	6.0	1.7	**1.5**	13	**613**
4/30/2009	7.2	7.5	4.5	**2.2**	**70.0**	49	**2420**
5/31/2009	7.3	7.6	1.2	1.9	**450.0**	**448**	**2420**
6/30/2009	7.3	7.5	2.8	1.5	**1.5**	118	**1733**
7/31/2009	7.3	7.8	**0.7**	1.2	NR	62	**2420**
8/31/2009	7.3	7.6	**0.4**	1.8	**34.0**	99	**1733**
9/30/2009	7.1	7.6	**0.4**	**2.2**	**49.0**	**180**	**2420**
10/31/2009	7.2	7.7	4.0	1.8	0.6	36	**2420**
11/30/2009	7.3	7.6	6.3	**2.2**	**125.0**	23	126
12/31/2009	7.4	7.7	3.4	2.0	**175.0**	**561**	**2420**
1/31/2010	7.3	7.6	5.3	1.8	**125.0**	**2036**	**2420**
2/28/2010	7.4	7.6	4.6	**2.2**	**80.0**	**634**	**2420**
3/31/2010	7.5	7.7	5.5	**2.2**	**6.0**	**259**	**2420**
4/30/2010	7.4	7.6	3.4	**2.2**	**32.0**	**506**	**2420**
5/31/2010	7.4	7.8	**0.0**	**2.2**	**60.0**	**781**	**2420**
6/30/2010	7.3	7.6	1.1	1.4	**71.0**	**1823**	**2420**
7/31/2010	7.4	7.7	**0.1**	**2.2**	**100.0**	**350**	**2420**
8/31/2010	7.4	7.7	3.0	1.3	**74.0**	**872**	**2420**